NORTHARD EXHIBIT 51

December 21, 2007

Mr. Michael D. Wadley
Site Vice President
Prairie Island Nuclear Generating Plant
Nuclear Management Company, LLC
1717 Wakonade Drive East
Welch, MN 55089

SUBJECT: PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNITS 1 AND 2
NRC PROBLEM IDENTIFICATION AND RESOLUTION
INSPECTION REPORT 05000282/2007006 AND 05000306/2007006

Dear Mr. Wadley:

On November 20, 2007, the U.S. Nuclear Regulatory Commission (NRC) completed a team inspection of problem identification and resolution at your Prairie Island Nuclear Generating Plant, Units 1 and 2. The enclosed inspection report documents the inspection findings which were discussed on September 28, 2007, with Mr. J. Sorensen and other members of your staff and on October 4, 2007, with Mr. M. Wadley and other members of your staff. Subsequently, on November 20, 2007, additional inspection details were discussed with Mr. S. Northard of your staff.

This inspection was an examination of activities conducted under your license as they relate to the identification and resolution of problems, compliance with the Commission's rules and regulations, and with the conditions of your operating license. Within these areas, the inspection involved selected examination of procedures and representative records, observations of activities, and interviews with personnel.

There were no findings of significance identified during this inspection. On the basis of the sample selected for review, the team concluded that, in general, problems were properly identified, evaluated, and corrected.

If you contest the subject or severity of a non-cited violation, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with a copy to the Regional Administrator, U.S. Nuclear Regulatory Commission - Region III, 2443 Warrenville Road, Suite 210, Lisle, IL 60532-4352; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the Resident Inspector Office at the Prairie Island Nuclear Generating Plant.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS), accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

***/RA/***

Richard A. Skokowski, Chief
Branch 3
Division of Reactor Projects

Docket Nos. 50-282; 50-306
License Nos. DPR-42; DPR-60

Enclosure: Inspection Report No. 05000282/2007006 and 05000306/2007006
w/Attachment: Supplemental Information

cc w/encl: D. Cooper, Senior Vice President and Chief
Nuclear Officer
M. Sellman, President and Chief Executive Officer
Regulatory Affairs Manager
J. Rogoff, Vice President, Counsel & Secretary
Nuclear Asset Manager
State Liaison Officer, Minnesota Department of Health
Tribal Council, Prairie Island Indian Community
Administrator, Goodhue County Courthouse
Commissioner, Minnesota Department
of Commerce
Manager, Environmental Protection Division
Office of the Attorney General of Minnesota

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M. Sellman, President and Chief Executive officer
Regulatory Affairs Manager
J. Rogoff, Vice President, Counsel & Secretary
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State Liaison Officer, Minnesota Department of Health
Tribal Council, Prairie Island Indian Community
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Office of the Attorney General of Minnesota

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Letter to M. Wadley from R. Skokowski dated December 21, 2007

SUBJECT: PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNITS 1 AND 2
NRC PROBLEM IDENTIFICATION AND RESOLUTION
INSPECTION REPORT 05000282/2007006 AND 05000306/2007006

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REGION III

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| Docket Nos: | 50-282; 50-306 |
| License Nos: | DPR-42; DPR-60 |
| Report No: | 05000282/2007006 and 05000306/2007006 |
| Licensee: | Nuclear Management Company, LLC |
| Facility: | Prairie Island Nuclear Generating Plant, Units 1 and 2 |
| Location: | Welch, MN 55089 |
| Dates: | September 10 through November 20, 2007 |
| Inspectors: | D. Smith, Project Engineer - Team Lead<br>D. Karjala, Resident Inspector<br>P. Zurawski, Resident Inspector<br>M. Phalen, Health Physicist |
| Approved by: | R. Skokowski, Chief<br>Branch 3<br>Division of Reactor Projects |

Enclosure

## SUMMARY OF FINDINGS

IR05000282/2007006, 05000306/2007006; 09/10/2007 - 10/04/2007; Prairie Island Nuclear Generating Plant, Units 1 and 2. Identification and Resolution of Problems.

This report covers an approximate four week period of inspection by a project engineer, two resident inspectors, and a health physicist. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated July 2006.

### Identification and Resolution of Problems

In summary, the inspectors determined that the station's Corrective Action Program (CAP) was adequate. Station personnel were generally effective at identifying plant issues through various methods, properly evaluating plant events, and initiating corrective actions to address deficient plant conditions. However, on occasions senior plant management failed to identify potentially significant issues and events. In addition, these issues were not properly assessed after being recognized.

The inspectors recognized that the site continued to struggle with certain elements of the CAP program as identified by both internal and external assessments and the station's analysis of the CAP. The station's decision to conduct an analysis of the CAP, which identified CAP performance problems, was good; however, based on self-assessment results the analysis could have been initiated earlier. Also, the team acknowledged that a significant level of senior management involvement and oversight was needed and has been expended to address these CAP problems. However, the inspection team recognized that sustaining this integral and high level of senior management involvement, until station behavior and CAP performance have made an appreciable change, will be a challenge to the station.

A common theme of the licensee focusing on the detection rather than prevention of station problems was noted during the last four problem identification and resolution (PI&R) inspection reports. Although this common theme was noted, the team did acknowledge that the station's performance had improved since the 2005 PI&R inspection; but, the improvement has been at a slow rate. The licensee made progress in effectively using operating experience at the station to prevent problems. In addition, nuclear oversight department personnel's insights and assessments results have been instrumental in improving station performance and reflected a positive presence in the further enhancement of station's performance.

In addition, the inspectors noted that station personnel had properly implemented the employee concern program (ECP). The inspectors determined through interview discussions that a safety conscious work environment existed at the station.

### A. NRC-Identified and Self-Revealing Findings

No findings of significance were identified.

### B. Licensee-Identified Violations

None.

## REPORT DETAILS

4OA2 Problem Identification and Resolution (PI&R) (71152B)

a. Assessment of the Corrective Action Program (CAP)

(1) Inspection Scope

The inspectors reviewed the licensee's CAP implementing procedures and manuals and attended CAP meetings to assess the implementation of the CAP by site personnel.

The inspectors reviewed risk and safety significant issues in the licensee's CAP since the last NRC PI&R inspection in October 2005. The selection of issues ensured an adequate review of issues across all NRC cornerstones. The inspectors used issues identified through NRC generic communications, departmental and Nuclear Oversight (NOS) assessments, operating experience (OE) reports, and NRC documented findings as sources to select the issues. The inspectors reviewed CAP items generated as a result of station personnel's performance in daily plant activities and a selection of completed investigations from the licensee's various investigation methods, which included root cause, apparent cause, cause, and common cause evaluations. Also, the inspectors assessed the licensee's ability to recognize deficient plant conditions, which potentially or actually adversely affected the functionality of safety related and augmented systems, and perform adequate evaluations of the identified deficient conditions.

The inspectors also selected two high risk systems, which included the emergency diesel generator and the auxiliary feedwater systems, to review in detail. The inspectors' review was to determine whether the licensee was properly monitoring and evaluating the performance of these systems through effective implementation of station monitoring programs. These systems were reviewed back five years to assess the licensee's efforts in monitoring for system degradation due to aging. The inspectors also walked down both systems to assess the material condition and maintenance of the systems. In addition, the inspectors reviewed the station's fire watch list to assess the station's level of effort in repairing fire protection equipment.

During the reviews, the inspectors determined whether the licensee's actions were in compliance with the station's corrective action program and 10 CFR 50, Appendix B requirements. Specifically, the inspectors determined if station personnel were identifying plant issues at the proper threshold, entering the plant issues into the station's CAP in a timely manner, and assigning the appropriate prioritization for resolution of the issues. The inspectors also determined whether the licensee assigned the appropriate investigation method to ensure the proper determination of root, apparent, and contributing causes. The inspectors also evaluated the timeliness and effectiveness of corrective actions for selected CAP items, completed investigations, and NRC findings, including non-cited violations.

This inspection constituted one biennial sample of problem identification and resolution as defined by Inspection Procedure 71152.

(2) Assessment

.1 Identification of Issues

The inspectors determined that the licensee had adequately implemented the station's CAP. Station personnel were generally effective at identifying plant issues at the appropriate threshold and entering the issues into the CAP. Generally, plant issues were properly prioritized and appropriate corrective actions were implemented to address the issues. Plant issues were identified during normal daily activities, management safety review committee site visits (MSRC), departmental and NOS assessments, Departmental Roll-Up Meeting (DRUM) Reports, Screening Committee meetings, and activities of the Performance Assessment Review Board (PARB) and the Technical Review Panel (TRP).

Even though the site demonstrated the ability to identify issues, the inspectors recognized that the site continued to struggle with certain elements of the CAP program. These elements were also identified by NOS assessments, the site's July 2007 PI&R focused self assessment (FSA), and the results from the station's CAP analysis (CAP-GAP). The station's decision to conduct the analysis, which identified CAP performance problems, was good. However, the decision could have been made earlier based on the fact that NOS had rated the performance of the station's CAP below expectations for seven consecutive quarters prior to senior plant management making this decision.

On occasions, plant personnel, along with senior management, failed to recognize potentially significant issues and events. These oversight examples were noted in various functional areas but especially in the radiation protection area. Additionally, once the plant deficiencies were acknowledged by station personnel, senior plant management lacked proper follow-up actions in assessing these potentially significant issues and events. Specific examples noted by the inspectors were discussed in the findings and observations section below. With the performance of the CAP analysis and the additional review efforts by PARB and TRP, the inspectors noted that a significant level of senior management involvement and oversight was needed and had been expended to address these CAP problems. Furthermore, the inspection team recognized that sustaining this integral level of senior management involvement, until station behavior and CAP performance have made an appreciable change, will be a challenge to the station.

Although potentially significant issues were occasionally overlooked, assessments from NOS were quite effective at identifying plant issues, as well as repeat issues, when implemented corrective actions were not effective in addressing the identified deficiencies or weaknesses. Generally, department and NOS assessments properly characterized issues as deficiencies when warranted. However, when documented issues were noted in assessments that implied program requirements or management expectations were not met, but did not result in unsatisfactory performance of the

assessed area, the licensee chose not to initiate CAP items for these types of problems. The inspectors noted that the licensee had documented several problems in the site's 2007 PI&R FSA; however, CAP items were not generated for any of the issues as discussed in the Findings and Observation Section.

The results from the partial system walkdowns, conducted by the inspectors, indicated that systems were generally well maintained; however, the inspectors identified six issues that were not previously identified by operators or engineering personnel during routine plant walkthroughs and system monitoring activities. Although some of the deficiencies were minor in nature and did not adversely impact system operability, two of the walkdown deficiencies required the licensee to perform evaluations to determine if the affected safety related or augmented equipment remained operable based on the identified deficiencies.

Furthermore, the inspectors noted that there was a common theme during the last four PI&R inspection reports, specifically, that the licensee tended to focus on detecting problems rather than prevention problems. Although this common theme was noted, the team did acknowledge that the station's performance had improved since the 2005 PI&R inspection.

Findings and Observations

(1) **Failure to Recognize Potentially Safety Significant Issues and Events**

**Radiation Protection Issues**

In the area of radiation protection (RP), there have been issues identified where RP personnel failed to initiate CAPs at the appropriate threshold consistent with senior station management expectations (CAP 01032424). This issue has adversely impacted the thoroughness of some reviews. Specifically, if the lower-level issues had been appropriately documented in the corrective action program in a timely manner, more radiologically meaningful events may have been avoided. Also, there were examples where low-level events were assessed in terms of their tangible outcomes and not reviewed for their impact relative to station programs or procedures. Consequently, station management has missed opportunities to review and evaluate low-level events as pre-cursors in order to potentially avoid more radiologically significant issues. Additionally, once issues were identified, on several occasions site management failed to recognize their full significance and their potential regulatory impact.

Specific examples include:

- Locked High Radiation Area Guard (LHRA) Issue During High Integrity Container (HIC) Transfer

  On December 4, 2006, Prairie Island station personnel were transferring a high integrity container [(HIC) No. 129] containing radioactive resin from the back of a flat bed trailer into a HIC storage area in the radioactive waste barrel yard. At approximately 10:30 hours, a station operator, while responding to a high level

tank alarm on the radioactive waste liquid processing panel in the radioactive waste facility, entered a Locked High Radiation Area (LHRA) that was being controlled by a LHRA guard controlling area access. The regulatory aspects of this issue was documented in NRC Inspection report 05000282/2007002 and 05000306/2007002.

This issue was not entered into the licensee's CAP in a timely manner (i.e. approximately one month after the event) and the initial evaluation of the issue was not comprehensive or thorough relative to regulatory impact, nor the potential for this event to be an occupational radiation safety performance indicator occurrence as defined in Nuclear Energy Institute (NEI) 99-02 "Regulatory Assessment Performance Indicator Guidelines." Additionally, the licensee's evaluation did not fully develop the cause of the event nor evaluate this event in relationship to previous events concerning the performance and effectiveness of LHRA guards.

The station had a similar event involving the performance of LHRA guards controlling access to radiologically significant areas during the U-1 April 2006 refueling outage. On the night shift of April 28, 2006, a work crew was in the U1 Containment Airlock (a posted Locked High Radiation Area) without a Radiation Protection Specialist escort as expected by station management. This earlier event, although known to members of the licensee's staff, was not entered into the CAP until it was brought to the licensee's attention by the NRC approximately nine months later (CAP 01075188; dated February 01, 2007).

- Mistake in Calculating Derived Air Concentration (DAC) Levels

  During the opening of 11 steam generator that led to an airborne event on May 2, 2006, the licensee collected frequent containment air samples and analyzed them for airborne gaseous and particulate levels. During one of the sampling counts and assessment, a mistake in calculating a DAC was made and it resulted in reporting higher level than was present. While this was a conservative mistake, it did provide information that should have been reviewed for potential program improvement. No corrective action document was immediately written. After discussion of this issue with the NRC, a corrective action program document was written May 22, 2006 (CAP 01031483).

**Technical Support Center (TSC) Ventilation Damper**

The inspectors reviewed CAP 01110686 that documented that operators found an actuating rod for a TSC emergency ventilation damper disconnected. The actuator had been disconnected without procedural guidance. With the actuator disconnected, the damper would not function as designed. The actuating rod was connected following initiation of the CAP. While the licensee identified the issue with a TSC ventilation damper, the licensee failed to evaluate the issue for past operability and regulatory impact until questioned by NRC inspectors. Once the licensee recognized the need to evaluate this issue, the inspectors noted inconsistencies between the information provided by various licensee departments, particularly Emergency Preparedness,

Engineer and Licensing. Furthermore, these inconsistencies indicated shortcoming in the licensees' management oversight associated with this issue. Therefore, this issue is considered an unresolved item (URI) pending the inspectors' review of the operability of the TSC while the damper was disconnected. **(URI 05000282/2007006-01; 05000306/2007006-01)**

**Emergency Diesel Generators and Auxiliary Feedwater System**

The NRC inspectors identified several minor issues during a walkdown of emergency diesel generators and auxiliary feedwater pumps that were not previously identified by operators or system engineers during routine rounds and system walkdowns. Examples included a fire extinguisher and diesel engine tools that were not properly secured, a temporary communications transmitter that was installed on a pipe support without an engineering evaluation, and contact between diesel engine fuel lines. The last two items were subsequently evaluated by the licensee and determined not to have an adverse impact on operability.

**Emergency Siren Repeaters**

The inspectors reviewed CAP 01029268 that documented that station repeaters were not designed to Design Class I requirements and that the station had been unsuccessful in utilizing the Seismic Qualification Users Group methodology to determine that the condition was acceptable. In this case, the licensee did not address the potential impact on the plant with respect to addressing whether this equipment remained operable in this degraded as-found condition. Also, the licensee did not address whether compensatory measures were required to ensure the equipment remained functional to perform necessary emergency preparedness actions. The inspectors discussed these concerns with the licensee and were subsequently informed that the repeaters were not required to be Design Class I and therefore the as found design was acceptable. Follow-up discussions with the regional emergency preparedness specialist resulted in agreement with the licensee's conclusion.

(2) **Inadequate Follow-up Once Potentially Safety Significant issues and Events were Acknowledged**

Refueling Outage 1R24 Airborne Conditions

During the 1R24 refueling outage, 110 radiation workers were contaminated when the Steam Generator manways were opened at approximately 19:00 hours on May 2, 2006. In this instance, the licensee did not adequately evaluate the internal exposure hazard prior to exposing personnel, nor document the hazard appropriately in accordance with station procedures (CAP 01027653).

In terms of the station's corrective action program, similar radiological characteristics existed in the reactor coolant system (RCS) prior to the 2001 refueling outage. Specifically, pre-outage primary system iodine-131 levels in 2001 were very similar to the pre-outage levels for the 2006 outage. During the 2001 outage the licensee managed these levels of iodine-131 radioactivity in the primary coolant successfully

(i.e., there were no adverse radiological outcomes). Since the 2001 outage did not result in dose significant intakes from airborne iodine-131, this was a missed learning opportunity and only limited measures were planned in an effort to preclude airborne radioactivity in the containment during the 2006 refueling outage.

Furthermore, a separate radiological airborne event occurred on May 2, 2006, earlier in the day (day shift), when the Reactor Pressure Vessel Head was intended to be vented through a High Efficiency Particulate Air (HEPA) filter to the containment clean-up filtration unit that consists of a pre-filter, HEPA and charcoal bank. However, due to an incorrect ventilation line-up, iodine-131 and noble gases were bypassing the filtering system and were actually being vented to the containment building. The ventilation line-up error was discovered when containment air sampling showed an increase in the airborne radioactivity (iodine-131, 0.4 DAC).

Had the licensee accurately recognized and evaluated the initial elevated day-shift iodine concentrations as a precursor event, the licensee would have had the opportunity to make additional radiological assessments and establish additional radiological controls, prior to continuing with primary system openings / system breaches. Due partially to the failure to effectively capture lessons learned from the 2001 RCS iodine-131 inventory situation, and the failure to recognize the May 2, 2006, day shift event as a precursor to a more significant event, within 12 hours of the initial increase in containment airborne radioactivity, airborne radioactivity levels increased again when the Steam Generator manways were opened. The regulatory aspect of this issue was documented in NRC Inspection Report 05000282/2006003 and 05000306/2006003.

It was not until the NRC discussed the day shift airborne issue with the licensee's staff and management as a separate event with potentially separate causes and a precursor event, that a separate corrective action document was written (CAP 01032258 written May 25, 2006).

Off-Site Dose Calculation Manual Compliance

From May 5 to May 11, 2006, the Unit-1 Containment equipment hatch was open to the atmosphere to allow equipment and personnel in and out of containment in support of refueling outage and head replacement activities. The negative pressure necessary to prevent uncontrolled releases of radioactive material was not adequately maintained during periods when the equipment hatch was open and allowed air from containment to vent to the atmosphere through the containment building equipment hatch opening. This problem was identified by licensee staff on multiple occasions during the outage, however the problems were not consistently captured in the CAP. After questions were raised by the NRC, a corrective action document was written to evaluate and address the deficiencies associated with the potential containment radiological release path (CAP 01027608).

The station had multiple opportunities to identify and correct deficiencies associated with containment radiological effluent controls under similar circumstances during previous outages in 2004, 2005, and 2006. While these previous events were entered into the licensee's corrective action program, effective corrective action to prevent a recurrence

was not achieved. The regulatory aspects of this issue was documented in NRC Inspection Report 05000282/2006003 and 0500306/2006003.

Very High Radiation Area (VHRA) Key Control

During the unit-1 2006 refueling outage (U1R24), the C-sump VHRA keys may have been signed out by RP supervision over multiple shifts and then subsequently possession of the keys was apparently transferred to the containment radiation protection technician (RPT) Leads, who then transferred possession of the VHRA keys from RPT Lead to RPT Lead over a period of multiple shifts. Similar circumstances of non-conservative control of VHRA keys may also have existed during the unit-2 (2R24) outage. This situation had been identified in the licensee's corrective action program, after the spring 2006 (U1R24) refueling outage and prior to beginning the fall 2006 (U2R24) refueling outage (CAP 01029886 - May 2006).

At the time of the NRC inspection, the licensee's evaluation of the issue was not comprehensive or thorough relative to regulatory impact, nor for the potential for these events to be categorized as occupational radiation safety performance indicator occurrences as defined in NEI 99-02. Additionally, the licensee's evaluation to date did not fully develop the cause of the events. The regulatory aspects of this issue were documented in NRC Inspection Report 05000282/2007003 and 0500306/2007003.

(3) **Issues Not Captured in CAP**

The site's July 2007 PI&R FSA assessment noted that CAP liaisons were to perform CAP responsibilities full-time; however, the assessment noted that the engineering and maintenance CAP liaisons were performing other duties as well. Additionally, the licensee chose not to initiate a CAP item for this issue despite the assessment noting that there were no discussions of Human Performance for the CAP items reviewed during the pre-screening meeting. Also, the assessment provided a list of approximately eight CAP items which the evaluator believed to have had deficient Human Performance aspects associated with them. In addition, discussions with the evaluator indicated that the station had planned to initiate a CAP item on these issues. Follow-up discussions with the Nuclear Safety Assurance Manager (NSAM) indicated that not all of the eight examples listed actually had Human Performance deficiencies associated with them. Finally, the assessment documented that the operations liaison's supervisor did not see value in trending. Based on the ongoing challenges to the station's CAP, the inspectors considered that these types of issues warranted the generation of CAP items to ensure senior plant management remained abreast of the CAP performance and station personnel's perception of the importance of the CAP in continuing to improve plant performance. Subsequently these issues were added to the CAP.

.2 Prioritization and Evaluation of Issues

The inspectors concluded that the licensee had generally properly prioritized and evaluated issues, based on the safety significance of issues, as noted during the inspectors' attendance at pre-screening and screening meetings. However, as previously discussed in Section 4OA2.a.1, there were instances where senior plant management failed to properly evaluate potentially significant issues and events.

Additionally, the team noted that DRUM Reports did not identify similar CAP deficiencies as documented in NOS assessments. Due to the station's improved performance in this area, the inspectors did not identify any adverse trends that had not been previously captured in the CAP through department self-identification, NOS activities, or Management Safety Review Committee (MSRC) site visits.

Station owners of the maintenance rule, system health, surveillance, and boric acid station programs appropriately prioritized equipment system issues that had been identified in CAP items when program requirements were not met or upon the identification of adverse trends.

During the inspection team's review, it was determined that both Engineering and Maintenance had a large backlog of issues. Although backlog reductions have recently been experienced, the remaining number continues to create prioritization challenges to both Engineering and Maintenance personnel, as well as the station.

The inspectors' assessment of the results from the walkdown of the auxiliary feedwater and emergency diesel generators systems determined that the systems were properly maintained as the team did not note an excessive number of work requests against the systems. In addition, the inspectors concluded that the station was effectively monitoring for age degradation for, high risk systems, including the auxiliary feedwater and emergency diesel generators. Low risk significant systems that could lead to a plant transient such as, air compressors, heater drain tank, and charging pump systems, were appropriately monitored as well. These low risk significant systems had been placed on the station's Top 10 List in March 2006, and the station developed a project plan in June 2006 to address the poor performance of these systems. Although the licensee had initiated corrective actions in this area, the poor performance of these systems continued to adversely impact the plant. For example, the failure of the heater drain tank pump speed control on September 24, 2007, resulted in a slight reactivity management event.

Also, the inspectors reviewed each open CAP item for which a fire watch had been established as compensatory measures. The inspectors determined that the majority of the fire watches were associated with four CAP items. Specific CAP items required the replacement of several Appendix R fire doors and other long-term corrective actions that appeared commensurate with the safety significance of the identified issues. The inspectors considered the licensee's action to replace the fire doors, which had been modified, instead of evaluating the acceptability of the door's modified condition as a positive decision. Additional problems have been encountered in replacing the doors, resulting in significant schedule delays.

The inspectors determined that the licensee's selection of investigation methods, in most cases, for addressing site issues in all areas of plant operations was generally appropriate and commensurate with the safety significance of the issue or event. Specific exceptions to this performance, as noted by the inspectors were discussed below. In addition, the team concluded that evaluations, including root cause evaluations (RCEs), apparent cause evaluations (ACEs), cause evaluations, (CEs), and

common cause evaluation (CCEs), were generally acceptable. The team noted that the station had improved the quality of these evaluations since the last PI&R inspection.

Also, the inspectors determined that station personnel's performance in the area of effectiveness reviews continued to show improvement. Of particular note was the station's use of measurable criteria when performing effectiveness reviews and the contribution by PARB in improving the quality of these products by their review.

The issues identified by the inspectors are documented below.

Findings and Observations

**LACK OF THOROUGHNESS BY SITE PERSONNEL**

(1) **Operations Authorization Not Received Prior to Starting Work**

The inspectors reviewed work order 0292220-01 which was related to installation of Raychem splice on the Unit 2 Excore detection Train A, 2N51. Review of this work order task identified that, contrary to Procedure FP-PA-ARP-01, the licensee failed to obtain Operations authorization prior to the start of work. Specifically, the work order received Operations authorization on November 30, 2006, yet work to evacuate the cables began on November 27, 2006, with completion on November 28, 2006. At the time, Unit 2 was in refueling shutdown and 2N51 had been removed from service as of November 27, 2006. Consequently, this issue was minor and was incorporated into the licensee's corrective action system under CAP 01111279.

(2) **Owed-to Owner Improperly Closed a Level 'A' CAP**

The inspectors reviewed CAP 01063548, which was associated with a wiring problem with the residual heat removal system, to determine the effectiveness of corrective actions. This CAP was designated as a Level 'A' with numerous corrective action assignments. During review of the CAP it was noted that assignment 01063548-11 was closed out to Engineering Change 10185. This is contrary to the licensee's Work Management Procedure FP-WM-WOE-01, which does not allow closure of a Level 'A' CAP to another controlling document. Although assignment 11 was closed, the parent CAP remained open. Consequently, this issue was minor and was incorporated into the licensee's corrective action system under CAP 01112397.

(3) **Temporary Modification Not Followed for Communications Transmitter**

The inspectors performed an in-plant walkdown of the Auxiliary Feedwater System. The inspectors identified a communications transmitter attached to a pipe support with tie-wraps. The inspectors questioned whether the transmitter had been installed in accordance with the Temporary Modification procedure and had been properly analyzed for compliance with seismic design criteria. The transmitter was installed without engineering evaluation or authorization, contrary

to the requirements of the Temporary Modification procedure. The transmitter was removed, the issue was entered into the corrective action program (CAP 01111255). Subsequent evaluation determined there was no adverse impact on the auxiliary feedwater system. Therefore, this issue was minor.

.3 Effectiveness of Corrective Action

The inspectors concluded that the licensee generally implemented corrective actions that were effective and timely in addressing plant issues. However, the inspectors acknowledged the licensee's recognition that the station continued to struggle with this element of the CAP. Several NOS assessments, the station's 2007 PI&R FSA, as well as the station's CAP-GAP Analysis documented issues in this CAP element. The NSAM provided the inspectors a presentation on the CAP-GAP Analysis. The licensee had initiated numerous corrective actions to address deficiencies in the station CAP. Only one item had not been completed from Revision 0 and several actions were still ongoing from Revision 1 of the CAP GAP Analysis Improvement Plan. The inspectors determined that the licensee's completed efforts as well as the pending actions should continue to improve the licensee's performance in this area as well as other plant areas. In addition to the CAP-GAP Analysis, the licensee had previously completed CCEs in a number of plant areas as well as for supervisory oversight and Human Performance. Generally, the licensee's corrective actions from these evaluations appeared appropriate to address the common causes identified in the CCEs. Although station performance indicators showed a slight improvement in Human Performance, the licensee decided to seek further assistance in this area from an outside contractor.

Prior to the start of the NRC PI&R, the resident inspectors had previously identified three examples where the licensee failed to document adequate justification for system operability based on as-found deficient conditions; the examples including D6 emergency diesel generator vibration issues; low lube oil pressure conditions on a safety injection pump; and the location of scaffolding between two component cooling water system heat exchangers. These examples were identified by the resident inspectors after corrective actions, which entailed providing specific training to senior reactor operators in the area of operability evaluations, had been implemented by the station. In each case the equipment was subsequently determined to be operable, however, the lack of a thorough evaluation indicated the need for additional improvement by the licensee in this area.

During this inspection, the inspectors identified that some operability evaluations neither discussed the affect of system operability for component failures nor provided an adequate basis for system operability once station personnel recognized that an identified deficiency had potentially affected system functionality of safety related or augmented systems. The pre-screening committee and senior reactor operators did not ensure operability evaluations were initiated for as-found deficient conditions and did not ensure that documented basis for those operability evaluations completed were adequate. Specific examples where the licensee's performance was less than adequate included the discovery that the actuator for the technical support center ventilation damper had been disconnected, and the licensee's investigation into the impact of an outside air temperature of -30 degrees Fahrenheit on the emergency diesel generators.

However, the licensee's recent performance in assessing the six deficiencies noted during the inspectors' walkdown was positive. The evaluations were thorough and the operability basis was appropriately documented for each deficiency where appropriate.

The inspectors noted that the licensee's implemented corrective actions, for trending problems documented in the 2005 PI&R inspection report, contributed to improved performance in this area. After addressing trend code problems with approximately 280 CAP items in May 2007, the licensee has been able to electronically trend code 100 percent of the CAP items. The station conducted monthly CAP meeting with the CAP liaisons to further enhance the station's ability to perform effective trending of plant issues. Although, the inspectors recognized improvement in this area, the inspectors also noted that improvement was still warranted because the DRUM reports had failed to identify the same types of CAP deficiencies that were documented during NOS assessments.

Several NOS assessments noted that the operations department was not driving the plant and the January 2007 MSRC minutes documented that the operations department was not setting the right priorities and holding station personnel accountable for issues. Operations DRUM trend reports for the first three quarters of 2006 identified adverse trends in reactivity management events, unplanned Limiting Condition of Operation (LCOs) entries, and operator burdens due to equipment failures. Regarding equipment failures, the heater drain system, charging system, and instrument air system were placed on the Top Ten Equipment List in early 2006, and improvement projects were initiated in mid-2006. However, continued improvement is warranted based on a recent reactivity transient on September 24, 2006, which was due to the failure of a heater drain tank pump speed controller.

Findings and Observations

**Examples of Inadequate Corrective Actions Taken by the Licensee**

**Additional Specific from Examples of Inadequate Operability Evaluations**

The team noted several examples where SRO and screening committee reviews did not ensure adequate documentation of equipment operability. Examples included diesel generators D5 and D6 at temperatures below -30F, D6 generator vibration that exceeded the manufacturer's limits, Safety Injection pump low lube oil pressure, and scaffold between Component Cooling heat exchangers.

**Equipment Failures Continue to Adversely Impact the Plant (Recent Heater Drain Tank Pump Failure)**

Operations DRUM trend reports for the first three quarters of 2006 identified adverse trends in reactivity management events, unplanned LCOs, and operator burdens due to equipment failures. The equipment failures from the heater drain system, charging system, and instrument air system resulted in placing those systems on the Top Ten Equipment List in early 2006, and improvement projects were initiated in mid-2006.

However, the team noted a reactivity transient on September 24, 2007 from the failure of a heater drain tank pump speed controller.

b. **Assessment of the Use of Operating Experience**

(1) Inspection Scope

The inspectors reviewed the licensee's implementation of the station operating experience (OE) program. Specifically, the inspectors reviewed implementing OE program procedure, attended CAP meetings and assessed completed evaluations to determine the licensee's level of use of OE information for plant issues and events. The inspectors' activities would determine whether industry events were prevented as a result of the licensee's efforts in integrating OE experience in the performance of daily activities and in the performances of departmental and NOS assessments. The inspectors also assessed if corrective actions, as a result of OE experience, were identified and effectively and timely implemented.

(2) Assessment

The inspectors did not identify any findings of significance in this area. However, NOS assessments had previously identified that the station was experiencing difficulty with the use of OE in the performances of RCEs. Based on acceptable follow-up actions by the station for a quality assurance finding (QAF) this area, which was a repeat issue, NOS recently closed out the QAF. As a result of efforts by NOS department personnel and subsequent effective corrective actions by the station, the inspectors noted that the station had improved in this area. The inspectors' review of RCEs determined that station personnel properly utilized OE during these evaluations. However, the inspectors did note one instance where the licensee's use of OE was lacking.

**Delayed Use in Operating Experience on Fuel Line Fretting**

The inspectors identified one example where the licensee experienced delayed use of operating experience. This operating experience related to emergency diesel generator (EDG) fuel line fretting, an issue which had been identified previously through Information Notice (IN) 89-07. The licensee had performed walkdowns to identify potential EDG fretting/rubbing issues as part of the documented evaluation for the Information Notice. However, during the inspection, inspector walkdowns identified several instances where similar conditions existed on the D5 and D6 EDG. These observations were conveyed to the licensee's System Engineer who promptly identified the condition via CAP 01111288. The licensee's evaluation concluded that the observed areas of rubbing/fretting were associated with fuel oil leak-off recovery lines rather than the high pressure fuel oil lines. Consequently, the observations were determined to be minor.

c. **Assessment of Self-Assessments and Audits**

(1) Inspection Scope

The inspectors assessed the station's ability to identify and enter issues into the station CAP, prioritize and evaluate issues, and implement effective corrective actions, through efforts from departmental and NOS assessments. The inspectors also assessed the licensee's ability to properly capture the documented deficiencies from assessments into CAP items. Additionally, the inspectors assessed the licensee's follow-up actions to a CAP item involving potential non-compliance with the quality assurance topical report.

(2) Assessment

The inspectors concluded that the licensee's departmental and NOS assessments were generally effective at identifying plant deficiencies at an appropriate threshold level. The licensee generally characterized identified issues in assessments and subsequently captured the identified issues into the CAP. The inspectors also reviewed the site FSA for the component design bases inspection (CDBI). The inspectors did not identify any discrepancies with how the licensee characterized documented deficiencies, from assessments, into CAP items. However, the second quarter 2007 NOS assessment mischaracterized the NRC results from the CDBI; the assessment indicated that the site's results were superior when compared to other nuclear facilities. The team lead for the NRC's CDBI characterized the licensee's performance as good with respect to identifying issues but either subsequently minimized or did not address the significance of issues. In addition, the inspectors noted that some issues documented in the FSA for the upcoming 2007 PI&R inspection were not captured as CAP items as previously discussed in Section 4OA2.2.

The site's 2007 PI&R FSA properly assessed the CAP and determined although several areas needed improvement, the station was adequately implementing the CAP. The FSA documented issues in the following three major areas of cause analysis, areas to focus on in operations, CAP tracking and trending process. The inspectors noted those CAP deficiencies documented in the NOS assessments were not also noted in the quarterly DRUM reports. In discussing this issue with the Performance Assessment Manager, he acknowledged the inspectors' comments and noted that despite this oversight, the quality and effectiveness of DRUM reports had improved since the 2005 NRC PI&R inspection**;** the inspectors agreed with this statement**.** The licensee noted trend coded deficiencies in various documents such as CCEs, and NOS and departmental assessments.

The inspectors held discussions with the NOS Manager regarding NOS activities with respect to the station's performance in CAP. Discussions indicated that the station has improved in the area of CAP, that conclusion was supported by station performance indicators. However, both the NOS Manager and the inspectors agreed that the rate of station improvement has been slow.

In addition, the inspectors had discussions with the NSAM regarding CAP 01070094 which documented several problems with the licensee's development and issuance of

the site's assessment schedule. The licensee appeared to have taken appropriate corrective actions to address these issues. Also, the inspectors had discussions with the NOS Manager and the Nuclear Oversight Program Manager regarding CAP 01110429. The licensee generated this CAP as a result of CAP 01105268 which documented potential non-compliance with the quality assurance topical report at the Point Beach Nuclear Plant. These discussions indicated that the issues documented in the CAP 01105268 were not valid issues due to misconception and terminology issues in documenting the issue. Therefore, the station's response to CAP 01110429 would still be tracked to completion without having to have implemented any interim corrective actions.

Based on the inspectors' review of NOS assessments and discussion with the NOS Manger, the inspectors concluded that insights and assessments results by NOS department personnel have been instrumental in the station's improved performance and reflect a positive presence by NOS.

d. **Assessment of Safety Conscious Work Environment**

(1) Inspection Scope

The inspectors assessed the station's safety conscious work environment (SCWE) through review of the station's employee concern program (ECP) implementing procedures, discussions with coordinators of the ECP, interviews with personnel from various station departments, and reviews of station performance indicators.

(2) Assessment

The inspectors determined that ECP was properly implemented by the station. Interviews with site workers that they were willing to raise nuclear safety concerns, had initiated a CAP item directly or indirectly through supervision, and had been involved in the monthly safety culture survey. Also, interview discussions revealed that plant workers were knowledgeable of the various available methods for raising nuclear safety concerns. Furthermore, the workers communicated that station supervision supported the workers' efforts in raising issues. None of the workers indicated that they themselves or their co-workers had been retaliated against for raising safety concerns. Also, the inspectors reviewed SCWE training material, which had been developed in response to NRC Confirmatory Order Enforcement Action (EA-06-178), and determined that the training material appeared adequate to ensure a SCWE existed at the station. The inspectors also reviewed data associated with the station's effectiveness in ensuring workers' identifies were not revealed and sampled monthly survey data, some of which was weighed into performance indicators.

The inspectors' interview with the station's ECP coordinator revealed that she was fairly new in her position; however, interview results with station personnel indicated that their interface with her had been positive. The ECP coordinator indicated that she planned to conduct activities that would facilitate more awareness and understanding of the ECP and her role as the new ECP coordinator. The inspectors concluded that the ECP coordinators had been properly implementing the site's ECP based on discussions with

the Prairie Island coordinator and the Monticello ECP coordinator, who was the interim Prairie Island ECP coordinator, interviews with station workers, and a review of pertinent data. The inspectors concluded that an acceptable safety culture existed at the station. Although the results from these activities demonstrated that a safety conscious work environment existed at the station, additional ancillary comments made by station workers during the interviews were noteworthy. Some of the comments included:

- The effort to write a CAP item was an administrative burden because operations personnel had to write a CAP, generate a work request, and make a log entry. In addition, the threshold for initiating a CAP item continuously changed based on directions from operations department management.

- Station workers were not receiving feedback on the resolution of CAP items because the information was not readily retrievable or their supervisors did not provide the feedback in the departments of operations, maintenance, and engineering. Security personnel provided positive comments on their ability to received feedback on CAP items.

- Although the station's identification of a high backlog at the station was good; the large backlog was presenting a challenge to the prioritization of issues in the engineering and maintenance areas. Recently initiated actions by the station reduced the maintenance backlog from 170 to 120 items; however, despite these efforts, the remaining number was still considered a challenge to the maintenance department.

- Maintenance workers indicated that the CAP process was not user friendly and therefore, did not use the system and preferred for their supervisors to write their CAP items. This issue had been discussed in the 2005 PI&R inspection report. The NSAM indicated that additional training on the CAP initiation process would be provided to maintenance department personnel, to enhance their familiarization of the process.

Based on these types of comments, which had been addressed by the industry several years ago, the inspectors concluded that more management involvement was needed to ensure workers remained receptive to utilizing the CAP process.

## 4OA6 Meetings

### .1 Exit Meeting

On November 20, 2007, the inspectors presented additional inspection details via telephone to Mr. S. Northard of the licensee management team.

The inspectors presented the inspection results to Mr. M. Wadley and other members of licensee management on October 4, 2007. The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

A debrief meeting was conducted on September 28, 2007, to discuss the preliminary findings of the inspection with Mr. J. Sorensen and other members of licensee management. No proprietary information was identified.

4OA7 Licensee-Identified Violations

No findings of significance were identified.

ATTACHMENT: SUPPLEMENTAL INFORMATION

## SUPPLEMENTAL INFORMATION

## KEY POINTS OF CONTACT

Licensee

M. Wadley, Site Vice President
J. Sorensen, Site Director
P. Huffman, Plant Manager
S. Northard, Regulatory Affairs Manager
T. Allen, Nuclear Safety Assurance Manager
J. Anderson, Radiation Protection and Chemistry Manager
R. Brown, Nuclear Oversight Manager
L. Ganser, Nuclear Oversight Program Manager
J. Callahan, Emergency Preparedness Manager
M. Carlson, Engineering Director
K. Petersen, Performance Assessment Manager
M. Davis, Regulatory Affairs Analyst
F. Forrest, Operations Manager
D. Raebel, Refueling Project Supervisor
M. Runion, System Engineering Manager
S. Skoyen, Engineering Programs Manager
R. Zyduck, Design Engineering Manager
C. Mundt, General Superintendent, Instrumentation and Control Maintenance
M. Kent, Radiation Protection Supervisor
J. Kivi, Senior Regulatory Compliance Engineer
J. LeClair, Radiation Protection General Supervisor
R. Madjerich, Outage Manager
M. McKeown, Manager, Project Services
J. Mestad, Monticello Employee Concerns Program Manager
P. Gorman, Prairie Island Employee Concerns Program Manager

Nuclear Regulatory Commission

R. Skokowski, Chief, Reactor Projects Branch 3
S. Orth, Health Physic Lead
K. Stoedter, SRI Quad station
R. Jickling, Senior Emergency Preparedness Analyst

## LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

Opened

| | | |
|---|---|---|
| 05000282/2007006-01<br>05000306/2007006-01 | URI | Evaluate TSC operability during time with damper disconnected |

Closed

None

Discussed

None

## LIST OF DOCUMENTS REVIEWED

### REFERENCES

IN- 2005-20; Electrical Distribution System Failures Affecting Security Equipment; July 19, 2005
IN 2006-20; Foreign Material Found In The Emergency Core Cooling System; October 16, 2006
IN 2005-06; Failure To Maintain And Notification System Tone Alert Radio Capability; March 30, 2005
NEI 99-02; Regulatory Assessment Performance Indicator Guidance; Revisions 4 and 5

### Security

Sampling of IRs generated from October 2005 Through September 28, 2007

### CAPs Initiated As A Result Of The Inspection

CAP 01114211; NRC Reviewer Comments on CAP 01080816
CAP 01113205; Incomplete Response to PI&R Information Request
CAP 01111201; RCE Quality Improvements
CAP 01111215; Fuel Leak Downstream of LA-3-48 on D2 Day Tank
CAP 01111233; Loose Tools Found in D2 Room
CAP 01111239; Emergency Light Burned Out by Door Leading to D2 Room
CAP 01111255; Temporary Communications Transmitter on Plant Equipment Without Evaluation
CAP 01111288; D5/D6 Fuel Line Rubbing/Fretting
CAP 01111301; Fire Extinguisher Found Not Secured in D1 Room
CAP 01113484; NRC PI&R – D5/D6 Operability with Outside Air Temperature Less Than -30F

### Engineering and Maintenance

CAP 01021581; Develop Means to Track Fire Protection Commitments
CAP 01040089; Programmatic Weaknesses Identified During Gap Analysis
CAP 01040093; Configuration Management Issues as Part of Gap Analysis
CAP 01044917; Fire Area 34 and 36 Smoke Detectors are not Code Compliant
CAP 01044959; SER Committed Damper not Installed in AFWP Room Return Duct
CAP 01063548; Possible Train Separation/Common Cause RHR Wiring Problem
CAP 01064041; ISI Examination Area for Surface Exams for Category C2.21
CAP 01070714; 1R-11 Paper-Drive not Functioning Properly
CAP 01070752; Bus 26 Load Sequencer Failed Surveillance SP2095
CAP 01076151; 22 SBV Recirculation MD-32224 Lost Control Room Indication
CAP 01080358; 21 RHR Pump did not meet IST Acceptance Criteria
CAP 01081926; Entered Unplanned TS Action Statement Due to RPI K-7
CAP 01086219; Unit 2 Train A Safeguards Actuation and Unit Trip During Performance of SP 2032A
CAP 01093362; CV-31084 Exceeded Closing LST During SP-1111A
CAP 01093404; Fan Flow Rates not Revalidated Following System Configuration Change
CAP 01093716; CDBI07 Possible MOV Degraded Voltage Calculation Error

CAP 01094112; 12 Feedwater Inboard Seal Water Thermocouple not Controlling Setpoint
CAP 01094112; 12 Feedwater Pump Inboard Seal Water Thermocouple Not Controlling Setpoint
CAP 01094176; CDBI07 Non-conservative Input in Calculation ENG-EE-147
CAP 01094234; Unit 2, D5 Fuel Rack Differential Rack Position is Offscale High
CAP 01094961; D5 Fuel Rack Differential Rack Position Reading “1.” and High
CAP 01096073; CDBI07: Short-Circuit Airflow Potential in ZR Vent System
CAP 01096867; CDBI07 Explicit Inclusion of Delay Time Due to Voltage Dip
CAP 01097092; CDBI07 Possible Start Failure at Degraded Voltage without SI
CAP 01098027; CDBI07 - Wrong Locked Door Rotor Current used for MV-32144
CAP 01098038; CDBI07 - Charging Spring Motor Operation at Reduced Voltage
CAP 01098193; CDBI 07 Heater for 21 Safeguards Screenhouse Exhaust Fan
CAP 01098350; CDBI07 Error Identified in Table 1 of ENG-ME-178
CAP 01105267; Individuals Functioning as a CAP Coordinator and CAP Liaisons Have Not Completed Their JFG Qualifications
CAP 01106141; 22 CS Pump Failed to Manually Start During SP2090B
CAP 01106472; Unplanned TRM LCO Not Met Due to Steam Exclusion Failure
CAP 01107326; Unplanned LCO Entry Due to 1R11 Failing During SP 1027
CAP 01109272; Operating CRC Review of IN 2007-27 for Inclusion in Training
CAP 01060885; Fluid Leak Management Program Not Actively Tracking Leaks
CAP 01093387; Found Positioner Cam Loose on 31084-VZ
CAP 01090699; High Vibration on 12 Main Feedwater Pump
CAP 01111288; D5/D6 - Fuel Line Rubbing/Fretting
CAP 01063645; U2 2N52 in Containment Cable Issues
CAP 01063965; 2N51 Raychem Found to be Inadequate
CAP 01028381; 1N51 Erratic During Unit 1 Outage
CAP 01045016; Issue with Regulatory Commitment Change #03-02
CAP 01082674; Unplanned LCO for 1R11, TS 3.4.16.B
CAP 01090530; Root Cause 1080358 Enhancements
CAP 01094049; 121 Control Room Chiller Tripped on Startup
CAP 01102634; Possible Check Valve Back Leakage from 2RH-6-1 Letdown to RHR
CAP 01085806; Unit 1 Breaker 16-7, 12 SI Pump Breaker Inoperable
CAP 01039956; 2000 NFPA Compliance Reviews Lacked Detail
CAP 01040099; Potential Adverse Trend in Unplanned LCOs
CAP 01098119; CDBI07 Non-MOV Motor Sizing Procedure H6.3 Lacks Guidance
CAP 01094002; 11 and 12 Feedwater Pump Flow Imbalance

**Fire Protection**

CAP 00566343; Appendex R Fire Doors With Small Holes and/Or Tears In Face
CAP 01094691; Appendix R Fire Doors Not Surveilled Per Commitments
CAP 01022715; Appendix R Regulatory Position Questioned
CAP 01024661; Fire Doors Potentially Inoperable
CAP 01026878; Louvered Doors May Not Provide An Adequate Fire Barrier
CAP 01000334; EDG-1 Room 695' Turbine Building
CAP 01025390; This Action Is An Enhancement to the Fire Protection Defense-In-Depth
CAP 01094691; Appendix R Fire Doors Not Surveilled Per Commitments
CAP 01111487; Penetration 2687 Not Surveilled During SP 1192

CAP 01000334; 11B FWP Unit Clr not TOOS Since 12B FWP Unit Clr has Leak
Work Request (WR) 00026890; Fire Door is Inop Due to Not Auto Closing
WR 00027406; Penetration 1131 In Aux Bldg 755 U1 Is Damaged
WR 00027757; Door 440 Will not Close All the Way on Its Own
WR 00028030; Detector Had Several Trouble Alarms and Then A Fire Alarm
WR 01104067; 21 Battery RM Has A Crack In It
WR 00027113; U2 Fire Doors Will Not Self Close

**Emergency Preparedness**

CAP 01034729; Evaluate Additional EP Drills, MiniDrills, Tabletops
CAP 01101530; Failed DEP PI Opportunity in LOR Cycle 06-K 1
CAP 01101527; DEP Failure Identified Late
CAP 01029268; Emergency Communications are not Design Class I
CAP 01051610; Potential Negative Trend - TSC Emergency Ventilation
CAP 01102798; Electricians Failed to Meet Expected ERO Response Numbers
CAP 01110675; EP Equipment Needs Attribute for EP
CAP 010001641; EP Flooding EALs and AB-4 Flood, Conflict with USAR
CE 01101489; Failed DEP PI Opportunity in LOR Cycle 06K
CE 01103290; Drill Obj E3 Failed Due to Wrong PAR
CE 1078774-01; Oversight of Alert and Notification System Needs Improvement
CAP 01078873; Emergency Planning CAP AR and AS Closure Quality is Lacking
CAP 01078834; Conduct a Snapshot Evaluation of Emergency Planning
SWI EP-640; Radio Receiver Register; June 6, 2007

**Procedures**

DP-NO-DOC-01; QATR Management; Revision 2
DP-NO-IA-03; Internal Assessment Issue Characterization and Tracking; Revision 1
DP-NO-IA-07; Internal Assessment: Topic Selection, Scheduling, and Quarterly Reporting; Revision 2
DP-NO-IA-05; Assessment Effectiveness Review; Revision 0
DP-NO-IA-01; Internal Assessments; Revision 1
DP-NO-IA-03; Internal Assessment Issue Characterization and Tracking; Revision 1
FG-PA-CTC-01; CAP Trend Code Manual; Revision 8, May 15, 2007
FG-PA-DRUM-01; Department Roll Up Meeting (DRUM) Manual - Department Performance Trending; Revision 5
FG-PA-ACE-01; Apparent Cause Evaluation Manual; Revision 6
FG-PA-CCE-01; Common Cause Evaluation Manual; Revision 2
FG-PA-RCE-01; Root Cause Evaluation Manual; Revision 11
FL-CAP-SCT-001G; Screening Team, Screening Committee Member (Job Familiarization Guide); Revision 4, August 01, 2006
FL-LDP-PH1-016G; Action Request Process - Supervisor Leadership Development; Revision 0, October 16, 2006
FP-EC-ECP-01; Employee Concerns Program; Revision 3
FP-E-SE-03; 10CFR50.50 and 72.48 Processes; Revision 1
FP-PA-PI-01; Performance Indicator Control; Revision 3
FP-PA-ARP-01; Cap Action Request Process; Revision 12

FP-PA-ARP-01; Cap Action Request Process; Revision 16
FP-PA-OE-01; Operating Experience Program; Revision 6
FP-WM-WOI-01; Work Identification, Screening and Validation; Revision 0
FP-WM-WOI-01; Work Identification, Screening and Validation; Revision 1
FP-WM-WOI-01; Work Identification, Screening and Validation; Revision 2
FP-G-DOC–05; Procedure Writer's Guide; Revision 0
FP-PA-SA-03; SnapShot Evaluation; Revision 3
NMC-1; Quality Assurance Topical Report; Revision 3
RPIP 1001; Radiation Protection Program; Revision 8
RPIP 1004; Radiation Protection ALARA program; Revision 6
RPIP 1008; Radiation Protection Key Control; Revision 8
RPIP 1006; Access Control Procedures; Revision 15
SWI-EP-640; NOAA Radio Receiver Testing and Maintenance; Revision 3
5AWI 3.3.5; 50.59 Screening; Revisions 14 and 15
5AWI 3.10.8; Equipment Problem Resolution Process; Revision 10
5AWI 3.12.6; Leak Management Program; Revision 5
5AWI 10.1.0; Radiation Protection Program; Revision 7

**Corrective Action Program**

CAP 01095230; Former Employees Remain on SCADA Computer System
CAP 01109147; FSA Determined Workers Not Engaging in Package Development
CAP 01067288; Recurrence of RCE OE Quality Issues
CAP 01069825; CAPR Taken to Complete Status Before All Actions Completed
CAP 01070094; QA Finding - Self-Assessment Program
CAP 01005248; FSA-Causal Analyses Are Not Being Performed
CAP 01105267; Individuals Functioning As A CAP Coordinator CAP Liaisons Have Not Completed Their JFG Qualification
CAP 01103376; Potential Trends Assigned B Level Significance
CAP 01073908; Adverse Trend of Overdue CAP Actions at Prairie Island
CAP 01056287; Conduct Snapshot Assessment of Due Date Extension Quality
CAP 01105264; The Station Struggles With Full Implementation The CAP Program Tracking/Trending Process
CAP 01105256; FSA-Results In The Operations Area
CAP 01081953; Multiple Departments Reported Weaknesses in Human Performance
CAP 01105264; The Station Struggles with Full Implementation the CAP
CAP 01105267; Individuals Functioning as a CAP Coordinator and CAP
CAP 00889160; NRC PI&R Report (September 2005) Observation
CAP 01081194; Training Using Davis Besse Case Study
CAP 01028907; Potential Adverse Trend in 1R24 in Implementing FME Process
CAP 01063838; Adverse Trend in not Meeting FME Expectations
CAP 01028907; Potential Adverse Trend in Implementing FME Process
CAP 01063903; NRC IN 2006-20, Foreign Material Found in the Emergency Cool
CAP 01010399; Adverse Trend – CAP Operability Status Determined by Non-SRO
CAP 01023536; Adverse Trend in Tagging
CAP 01028048; Potential Adverse Trend in Number of CAPs Returned to SRO
CAP 01028054; Potential Adverse Trend in Unexpected Annunciators
CAP 01040099; Potential Adverse Trend in Unplanned LCOs

CAP 01040199; Adverse Trend Identified on Equipment Affecting Reactivity
CAP 01077406; Operator Burdens Not Meeting KPI for Operational Excellence
CAP 01110686; Actuation Rod for MD-34602 Found Disconnected

**Radiation Protection**

CAP 0880560; ODCM Quarterly Composite Sample Lost
CAP 0883454; 60B Wind Direction Monitor on Met Tower is Stuck
CAP 01010089; Possible Adverse Trend for Redundant Met Tower Instruments
CAP 01027384; Removal of High Radiation Boundary by Unauthorized Personnel
CAP 01027608; Inadequate Effluent Release Controls at the Unit 1 Equipment Hatch
CAP 01027645; High Airborne Unit One Containment Due To Steam Generator Venting
CAP 01027653; Airborne Area in U1 Containment Due to Iodine Levels in RCS
CAP 01028448; Non-Conservative Control of LHRA Keys
CAP 01028580; Lack of Communication for Effluent Release
CAP 01028594; Control of Receipt Area Roll Up Doors Poor
CAP 01028608; Worker Removed Radiation Boundary to By-pass Turnstile at Access
CAP 01029288; High Radiation Area Swing Gate Turned Due to Loose Base
CAP 01029400; Auxiliary Building and Spent Fuel Pool Vent Releases Higher Than Expected
CAP 01029812; SAR 01021899 Finding Control of HRA/LHRA Keys Not Robust During NMC Audit
CAP 01029875; Radiation Protection Chemistry Does Not have Plan for Challenges to Off Site Dose Calculation Limits
CAP 01029886; SAR 01024825 - Control of HRAs, LHRAs and VHRAs at Prairie Island
CAP 01031483; Incorrect Air Sample Data
CAP 01032220; Locked High Radiation Area Barrier to Spent Resin Tank Area Found Unsecured
CAP 01032424; Head Vent to Atmosphere Lacking High Efficiency Particulate Air Ventilation
CAP 01032258; Radiation Protection and Chemistry Group Threshold for Corrective Action Program Initiation is Too High
CAP 01032792; 12 Residual Heat Removal High Radiation Area Swing Gate Did Not Close
CAP 01033802; Adverse Trend High Radiation Area Control
CAP 01058701; Critical Receptor as Defined in ODCM Has Changed
CAP 01063096; Work Stopped in Containment Due to Breathing >0.3 DAC
CAP 01066963; Not Following Procedures for Airborne Conditions
CAP 01066716; Contamination in The Clean Area of The U1 CS Pump Room
CAP 01066929; HRA Identified at 123/124 ADT Filters
CAP 01070811; LHRA Guard HIC Control
CAP 01071917; NOS Identified Issues with Monthly PI Data Validation Techniques
CAP 01075188; HRA Guard U1R24 Airlock
CAP 01082272; Radiation Protection / Chemistry Department Roll-Up Meeting; First Quarter 2007
CAP 01083315; CAP GAP
CAP 01083807; U2R24 RWPs not Authorizing work in Airborne Areas
CAP 01083809; U2R24 Airborne Radioactivity Area Control Deficiencies
CAP 01083810; Administrative Control Deficiencies Associated with VHRA Keys
CAP 01087857; MIDAS Met and Radiation Monitor Data Collection Found Off
CAP 01091130; Potential Issue with problem Identification and Resolution

CAP 01098431; Evaluate CAP 1070811 for Potential NRC PI Violation
CAP 01098432; Evaluate CAP 1029812 for Potential NRC PI Violation
CAP 42127; Control of Air Flow in Containment/Annulus Was Not Maintained Negative

**Investigations**

RCE 01001641; Potential Error in Flooding Level for Declaring a Site Area Emergency
RCE 000200; Cardox Unavailability Due to Valve Mispositioning
RCE 01038128; Apparent 10 CFR 50.9 Violation Associated with July 2005 License Candidate Applications
RCE 01066705; Airlock Seal Test Not Performed Prior to Entering Mode 4
RCE 01080358; 21 RHR Pump Did Not Meet IST Acceptance Criteria
RCE 01100615; CAPR's Closure Conflicts with Procedural Requirements
RCE 01099775; High Radiation Area, Locked High Radiation Area, and Very High Radiation Area Controls
RCE 01099946; Site Response to Potentially Significant Regulatory Issues
RCE 01080358-01; 21 RHR Pump did not Meet IST Acceptance Criteria
RCE 01090699; 12 Feedwater Pump High Vibration; Revision 2
RCE 1086219-01; Unit 2 Train A Safeguards Actuation and Unit Trip During Performance of SP 2032A; Revision 03
ACE 01095071; Non-Compliant Manual Actions in FA 29
ACE 01022720; Fire Doors Potentially Inoperable
ACE 01070094; QA Finding - Self Assessment Program
ACE 01027653; Elevated Iodine-131 Level in Unit 1 Containment During 1R24
ACE 01028381-02; 1N51 Erratic during Unit 1 outage; No Revision/Date
ACE 01044959-02; SER Committed Damper not Installed in AFWP Room Return Duct
CCE 01080816; Security Depart. May Have Negative Human Performance Trend
CCE 01028907; Potential Adverse Trend in Implementing FME Process
CCE 01076458; Negative Trend in ERO Command and Control
CCE 01073908; Adverse Trend of Overdue CAP Actions at Prairie Island
CCE 01040099-11; Adverse Trend Identified for Unplanned LCOs during 2006
CE 01021581-01; Evaluate Need for Controlled Document to Track Commitment Changes to Fire Protection Program
CE 01040093-01; Lack of Configuration Management for Fire Protection
CE 01044917-01; Fire Area 34 and 36 Smoke Detectors

**Meetings**

September 5, 2007 - Site Pre-screening Meeting
September 11, 2007 - Operations Department Pre-screening Meeting
September 11, 2007 Site Pre-screening Committee Meeting
September 11, 2007 Screening Committee Meeting
September 12, 2007 - Screening Committee Meeting

## Assessments

### Departmental

SAR 01078592; Conduct Focused Self-assessment of Supv Oversight and Procedural Adherence; February 21, 2007
SAR 1078685; Emergency Preparedness Readiness Assessment; February 26, 2007

### Nuclear Oversight Observation Reports

Nuclear Oversight 1st Quarter 2006 Assessment Report
Nuclear Oversight 2nd Quarter 2006 Assessment Report
Nuclear Oversight 3rd Quarter 2006 Assessment Report
Nuclear Oversight 4th Quarter 2006 Assessment Report
Nuclear Oversight 1st Quarter 2007 Assessment Report
Nuclear Oversight 2nd Quarter 2007Assessment Report
Nuclear Oversight Assessment; 2007001-06-004 - Radiological Protection; January 25, 2007
Nuclear Oversight Assessment; 2007001-06-014 - Corrective Action Program; March 31, 2007
Nuclear Oversight Assessment Report for Prairie Island; 2nd Quarter 2007; July 26, 2007

### Department Roll-Up Meeting Agenda

Emergency Preparedness Department Roll-Up Meeting; First Quarter 2006 Through Second Quarter 2007
Security Department Roll-Up Meeting; First Quarter 2006 Through Second Quarter 2007
Site Roll-Up Meeting First Quarter 2006 Through Second Quarter 2007
Operations Department Roll-Up Meeting; April 25, 2006
Operations Department Roll-Up Meeting; July 24, 2006
Operations Department Roll-Up Meeting; October 23, 2006
Operations Department Roll-Up Meeting; January 31, 2007
Operations Department Roll-Up Meeting; April 20, 2007
Operations Department Roll-Up Meeting; July 13, 2007
Engineering Department Roll-Up Meeting Report; April-June 2007; July 22, 2007
Engineering Department Roll-Up Meeting Report; January-March 2007; May 10, 2007
Engineering Department Roll-Up Meeting Report; October-December 2006
Engineering Department Roll-Up Meeting Report; 3rd Quarter 2006; October 18, 2006
Engineering Department Roll-Up Meeting Report; 2nd Quarter 2006; August 10, 2006
Engineering Department Roll-Up Meeting Report; 1st Quarter 2006; April 1, 2006
Engineering Department Roll-Up Meeting Report; 4th Quarter 2005; January 31, 2006
Engineering Department Roll-Up Meeting Report; 3rd Quarter 2005; October 27, 2005
Maintenance Department Roll-Up Meeting Report; 2nd Quarter 2007
Maintenance Department Roll-Up Meeting Report; 1st Quarter 2007
Maintenance Department Roll-Up Meeting Report; October-December 2006
Maintenance Department Roll-Up Meeting Report; July-September 2006
Maintenance Department Roll-Up Meeting Report; 2nd Quarter 2006; August 28, 2006
Maintenance Department Roll-Up Meeting Report; 1st Quarter 2006; June 22, 2006
Maintenance Department Roll-Up Meeting Report; 4th Quarter 2005; March 06, 2006
Maintenance Department Roll-Up Meeting Report; 3rd Quarter 2005; December 16, 2005

**Management Safety Review Committee**

Prairie Island Management Safety Review Board Meeting; 2006-02
Prairie Island Management Safety Review Board Meeting; 2007-01

**Work Control Documents**

Work Order (WO) 00270634-01; IC: Loop 1N52 Investigate and Repair; April 22, 2006
WO 00282356-02; 1R24 and 1N51 is reading erratic - Investigate and Repair; May 5, 2006
WO 00292220-01; Loop 2N51 Maintenance for 2N51 During 2R24; November 30, 2006
WO 00292220-02; Electrical: Remove/Replace Loop 2N51 Raychem Splices; November 27, 2006
WO 00292221-01; Maintenance for 2N52 to Assist Vendor during 2R24; November 21, 2006
WO 00292221-02; Electrical: Remove/Replace Loop 2N52 Raychem Splices; November 22, 2006
WO 00333316-01; U1, 26311, Calibrate 12 MFWP Inboard Seal Water Thermocouple and Positioner; September 26, 2007
WR 00025025; U1, 26311, Calibrate 12 MFWP Inboard Seal Water Thermocouple and Positioner; May 25, 2007

**Miscellaneous Documents**

Commitment Change Evaluation 00078647 (CAP 01044959); January 15, 2007
Maintenance Rule Evaluation - CAP 01086219-06; 2SIA-A1 MG-6 Relay; No Date
Fire Protection Evaluation Screening; Evaluation for Ventilation Duct with No Fire Damper ENG-ME-437, Rev. 1; January 11, 2007
OPR 01093404-01; Safeguard Cooling Water Pumps (12 and 22 DDCLPs and 121 MDCLP); May 25, 2007
OPR 01096073-01; Screenhouse Safeguards Ventilation System which Impacts SSCs Important to the Operability of the Cooling Water System; June 15, 2007
OPR 01093716-1; PI's Motor Operated Valve Population of GL 96-05 MOVs; Revision 0, May 24, 2007
Evaluation of Existing Breaker 121C-25 Heater; (CAP 01098193); No Date
Evaluation for Ventilation Ducts without a Fire Damper in the AFWP Rooms; CAP 01044959; January 11, 2007
FL-CAP-SCT-001G; Coordinator, CAP Coordinator Job Familiarization Guide (Freddie Forest - Operating Screening Committee Member); Revision 2, August 5, 2005
FL-CAP-SCT-001G; Coordinator, CAP Coordinator Job Familiarization Guide (Paul Wiltse - Maintenance Screening Committee Member); Revision 2, August 5, 2005
FL-CAP-SCT-001G; Coordinator, CAP Coordinator Job Familiarization Guide (Raymond Sloss - Screening Committee Member); Revision 2, August 5, 2005
FL-CAP-SCT-001G; Coordinator, CAP Coordinator Job Familiarization Guide (Lynn Johnson - Screening Committee Member); Revision 2, August 5, 2005
FL-CAP-PAS-001G; Coordinator, CAP Coordinator Job Familiarization Guide (Joseph Muth - CAP Coordinator and Screening Committee Member); Revision 0, March 20, 2006
FL-CAP-PAS-002G; CAP Liaison Job Familiarization Guide (Heidi Maynard, Engineering CAP Liaison); Revision 0, September 28, 2006

FL-CAP-PAS-002G; CAP Liaison Job Familiarization Guide (Deanna Peterson - Maintenance CAP Liaison); Revision 0, September 28, 2006
AT-0075 CAP Screening Report; September 11, 2007
AT-0075 CAP Screening Report (Mark-up from Pre-screening Meeting); September 11, 2007
Equipment Reliability Bubble Chart; September 11, 2007
LER 2-06-02; Unit 2 Event Monitoring Instrument Inoperable Longer than Allowed by Technical Specifications; January 23, 2007
LER 1-06-03; Unit 1 Event Monitoring Instrument Inoperable Longer than Allowed by Technical Specifications; October 11, 2006
Plant Health Committee Packet; September 11, 2007
Top 10 Equipment Issues; September 11, 2007
Unit 2 Operations Control Room Logs; November 27-30, 2006

## LIST OF ACRONYMS USED

| | |
|---|---|
| ACE | Apparent Cause Evaluation |
| ADAMS | Agency-Wide Document Access and Management System |
| CAP | Corrective Action Program |
| CCE | Common Cause Evaluation |
| CE | Condition Evaluation |
| CFR | Code of Federal Regulation |
| DAC | Derived Air Concentration |
| DRUM | Departmental Roll-Up Meeting |
| ECP | Employee Concern Program |
| EDG | Emergency Diesel Generator |
| FSA | Focused Self Assessment |
| FME | Foreign Material Exclusion |
| HEPA | High Efficiency Particulate Air |
| HIC | High Integrity Container |
| LHRA | Locked High Radiation Area |
| LCO | Limiting Condition of Operation |
| MSRC | Management Safety Review Committee |
| NOS | Nuclear Oversight |
| NRC | United States Nuclear Regulatory Commission |
| NSAM | Nuclear Safety Assurance Manager |
| OE | Operating Experience |
| PARB | Performance Assessment Review Board |
| PI&R | Problem Identification and Resolution |
| QAF | Quality Assurance Finding |
| RCE | Root Cause Evaluation |
| RP | Radiation Protection |
| RPT | Radiation Protection Technician |
| SAR | Self-Assessment Report |
| SCWE | Safety Conscious Work Environment |
| TRP | Technical Review Panel |
| TSC | Technical Support Center |
| URI | Unresolved Item |
| VHRA | Very High Radiation Area |
| WO | Work Order |
| WR | Work Request |